Los Reales Landfill

Boundaries:

The site is located on the southeast side of Tucson, south of Interstate 10 at Craycroft Road (Craycroft turns into Los Reales Road going south from Interstate 10). The site includes an active municipal sanitary landfill located at 5300 East Los Reales Road consisting of approximately 380 acres. The City of Tucson owns and operates the landfill.

Site History:

- In 1967, the Los Reales Landfill opened and accepted municipal waste.

- From 1977 to 1980, low level hazardous waste was deposited in the Southwest Disposal Area (SWDA), which is approximately four acres in size and is in the southwestern portion of the landfill. This area and the main landfill cell area are unlined.

- In August 1988, volatile organic compounds (VOCs) were first detected in two monitor wells along Los Reales Road (the northern boundary of the landfill).

- In October 1991, the Remedial Investigation Report from the City of Tucson (the City) revealed a plume of VOC contaminated groundwater extending northwest approximately a quarter of a mile from the northwest corner of the landfill. The main unlined landfill cell appears to be the primary source of groundwater contamination.

- In September 1994, the Feasibility Study was submitted to ADEQ analyzing potential remedial strategies for the groundwater contamination.

- In April 1995, a letter of determination was approving the final Remedial Action Plan (RAP) which provided for a pump and treat reinjection system. In September 1997, ADEQ approved the conceptual design plan for installation of the treatment system. One year later, the City began construction.

- In March 1999, the pump and treat facility began operation. Groundwater is pumped from ten extraction wells, treated by air stripping, and contaminants are captured by a carbon filter. A portion of the treated water is reinjected into the aquifer by two injection wells and the other portion is used for dust control at the landfill. The system is designed to handle up to 90 gallons per minute.

- The site was placed on the WQARF Registry in April 1999 with a score of 32 out of a possible 120.

- In August 1999, landfill gas began being piped to Tucson Electric Power as an alternative fuel source. The landfill contains enough methane energy to power 4,000 homes.

Site Status:

- In April 1999, the City identified additional contamination while replacing a monitor well for new cell construction to the east of the current remedial system wells. By late summer 2003, the design for a new and larger scale pump and treat system may be finished. Prior to any RAP amendment, ADEQ will provide for a public notice and comment period.

- In February 2000, the City identified further contamination south of the existing plume while closing out the SWDA. In May 2003, the City began operating a soil vapor extraction (SVE) system to address high soil gas concentrations in this area. The City has applied for remedial actions at the SWDA to be regulated under the Voluntary Remediation Program of ADEQ.

Site Hydrogeology:

- The site is located within the Tucson Basin, a northwest trending alluvial valley covering an area of about 750 square miles in the Santa Cruz River drainage basin of southeastern Arizona.

- The subsurface lithology generally consists of alluvial deposits of sand, silt, clay, and some gravel. The upper portion of the aquifer consists of sandy silt or a sand with gravel and silt, and the lower portion of the aquifer begins between 190-205 feet below ground surface (bgs) with a silty clay or a sandy clay.

- Depth to regional aquifer occurs at depths of 190 to 210 feet below land surface. Groundwater flow is to the northwest.

Contaminants:

The current contaminants of concern in groundwater include tetrachloroethene (PCE) and trichloroethene (TCE). Contaminants of concern at the site may change as new data becomes available.

Public Health Impact:

In March 1994, the risk assessment for the site was finalized by Arizona Department of Health Services (ADHS). Results from the assessment indicate that because contaminated water from the area is not currently being used for drinking water, there are no significant health risks associated with this site.

Community Involvement Activities:

The City involved the community throughout the remedial investigation/feasibility study process. However, if the RAP is significantly modified, additional public comment will be solicited.

Information Repository:

Site information is available at ADEQ's Southern Regional Office located at 400 W. Congress, Suite 433 in Tucson. Files are available for review Monday through Friday from 8 a.m. to 5 p.m. Please call (520) 770-3361 to arrange a file review appointment at the Southern Regional Office.

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* In Arizona, but outside the Tucson area, call toll free (888) 271-9302.